

IN THE DRAWINGS

FIG. 1 is objected to because it is not designated by a legend such as "prior art." Accordingly, a replacement sheet for FIG. 1 is found in the Appendix that is attached following page 14 of this paper. The replacement sheet for FIG. 1 incorporates the appropriate change.

Replacements sheets for FIGs. 9 and 11 are also found in the Appendix, as the applicant has identified errors in those Figures.

REMARKS

Claim 13 is cancelled. Claims 14, 17, and 18 are amended. No new subject matter is added. Claims 1-12 and 14-18 remain pending in the application. For the reasons presented below, reconsideration and allowance of the pending claims is requested.

Priority

A certified copy of the Korean foreign priority document has been made of record in this case. In order to perfect the claim of foreign priority, an English translation of the foreign priority document is hereby submitted, along with a statement that the translation is accurate. MPEP 201.15. The translation and statement are included in the Appendix which is attached following page 14 of this paper.

Specification

The disclosure is objected to because of the following informalities: line 34 of page 1 refers to flash memory with the numeral 9. However, according to lines 33-34 of page 1, flash memory is represented by the numeral 4. With this amendment, the appropriate correction to the specification has been made.

The applicant has also identified other errors in the specification, which are corrected with the appropriate amendments.

Drawings

Figure 1 should be designated by a legend such as 'Prior Art', because only that which is old is illustrated. With this amendment, a replacement sheet for FIG. 1 is submitted with the appropriate change.

The applicant has also identified other errors in the drawings, and as a result replacement sheets for FIGs. 9 and 11 are also submitted with the amendment.

The changes to FIG. 9 are fully supported by the original application at, e.g., FIG. 8 and page 9, lines 10-33.

The changes to FIG. 11 are fully supported by the original application at, e.g., FIG. 10 and page 10, lines 30-34.

Claims

The amendment of claim 14 is fully supported by the original application at, e.g., claim 14, FIG. 9, and page 9, lines 8-33.

The amendment of claim 17 is fully supported by the original application at, e.g., claims 17 and 18, FIGs. 10-11, and page 10, line 18 to page 11, line 12.

The amendment of claim 18 is fully supported by the original application at, e.g., FIG. 11.

Allowable Subject Matter

Claims 5-6 and 11-12 are currently objected to for their dependence upon a rejected base claim, but are otherwise indicated to be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

At this time, the applicant wishes to retain claims 5-6 and 11-12 in their present form.

Claim Rejections – 35 U.S.C. § 102

Claims 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,601,167 to Gibson et al. ("Gibson"). The applicant disagrees.

Gibson teaches that a Gapless-read command results only in a single 7 μ s latency period as the first page is loaded from the memory 32 to the output data register (column 3, lines 60 to column 4, line 1). It was alleged that "the second page *must* be copied from flash memory to the output register while it transmits the first page from the output register to the system controller" because of the Gapless-read command (office action, page 4; emphasis added).

Alternatively, Gibson teaches that a normal read command may be used, which reads a single page at a time and has a 7 μ s latency period associated with each page read as the page is loaded into the output data register (column 3, lines 63-66). Unlike the Gapless-read command, Gibson does not teach that the normal read command requires the second page to be copied from flash memory to the output register while it transmits the first page from the output register to the system controller.

Thus, neither Gibson's Gapless-read command nor Gibson's normal read command teaches all the features of claim 14, since the claim requires BOTH copying second data from a second one of the selected pages to the buffer during a second time frame, where copying second data includes waiting over a latency period required for a read operation, AND transmitting the first data from the buffer to the system controller during the second time frame (emphasis added).

As explained above, Gibson is alleged to teach one feature or the other, but not both features simultaneously. Furthermore, Gibson contains no suggestion or motivation to combine the features of the Gapless-read command and the normal read command.

For at least this reason, Gibson fails to anticipate claim 14 because it does not show the identical invention in as complete detail as is contained in the claim. MPEP 2131.

Tang fails to anticipate claims 15 and 16 for at least the same reason it fails to anticipate claim 14. MPEP 2131.

Claims 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 20030206442 to Tang et al. ("Tang"). The applicant disagrees.

Tang's discussion of an interleaved access mode with respect to several buffering devices in paragraph [0023] does not implicate the description of successively loading that is recited in the claim. In particular, claim 17 recites that successively loading data means loading data into the buffer in the order in which the data is to be programmed to the NAND flash memory and that, except for the data for the last page to be programmed, no time delay exists between the loading of data for any one of the pages and the loading of data for a page to be programmed after the any one of the pages.

For at least this reason, Tang fails to anticipate claim 17 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Tang fails to anticipate claim 18 for at least the same reason it fails to anticipate claim 17. MPEP 2131.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 2, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admission of Prior Art ("AAPA") in view of U.S. Patent Application Publication No. 20030075609 to Kim ("Kim"). The applicant disagrees.

Kim constitutes prior art under 35 U.S.C. 102(e) as of its U.S. filing date, or 10 July 2002. MPEP 2136. The filing dates of foreign applications may not be used as 35 U.S.C. 102(e) dates for prior art purposes. MPEP 2136.03, emphasis in original.

Kim does not constitute prior art under any one of 35 U.S.C. 102(a), (b), (c), or (d). MPEP 2132, 2133, 2134, and 2135. Thus, Kim qualifies as prior art only under 35 U.S.C. 102(e), (f), or (g).

According to 35 U.S.C. 103(c), subject matter developed by another which qualifies as prior art only under 35 U.S.C. 102(e), (f), or (g) may be disqualified as prior art against the

claimed invention if that subject matter and the claimed invention “were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.” MPEP 706.02(1)(1), 2146.

The Kim reference and the application have the same assignee, namely, Samsung Electronics Co., Ltd. Furthermore, at the time the invention was made, it was subject to an obligation of assignment to Samsung Electronics Co., Ltd. Consequently, the Kim reference is disqualified as prior art for purposes of a 35 U.S.C. 103 rejection. 35 U.S.C. 103(c).

It is recognized that AAPA fails to teach or suggest all the features recited in claims 1, 2, 7, and 8. Therefore, since the Kim reference cannot be used in a 35 U.S.C. 103 rejection, the AAPA fails to establish a *prima facie* case of obviousness because it fails to teach or suggest all the features of these claims. MPEP 2143.03.

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kim and further in view of Gibson. The applicant disagrees.

As explained above, Kim is disqualified under 35 U.S.C. 103(c) for use in an obviousness rejection. The combination of AAPA and Gibson admittedly does not teach or suggest all the features recited in claims 3 or 9, consequently a *prima facie* case of obviousness has not been established. MPEP 2143.03.

Furthermore, claims 3 and 9 depend from claim 1. As explained above, claim 1 is not obvious in view of the AAPA. Consequently, claims 3 and 9 are allowable over the prior art of record at least because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03.

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kim and further in view of Tang. The applicant disagrees.

As explained above, Kim is disqualified under 35 U.S.C. 103(c) for use in an obviousness rejection. The combination of AAPA and Tang admittedly does not teach or suggest all the features recited in claims 4 and 10, consequently a *prima facie* case of obviousness has not been established. MPEP 2143.03.

Furthermore, claims 4 and 10 depend from claim 1. As explained above, claim 1 is not obvious in view of the AAPA. Consequently, claims 4 and 10 are allowable over the prior art of record at least because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03.

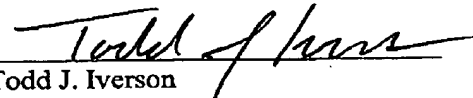
Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Gibson. Claim 13 is cancelled.

Conclusion

For the above reasons, reconsideration and allowance of the pending claims is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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Li Mei Vermilya

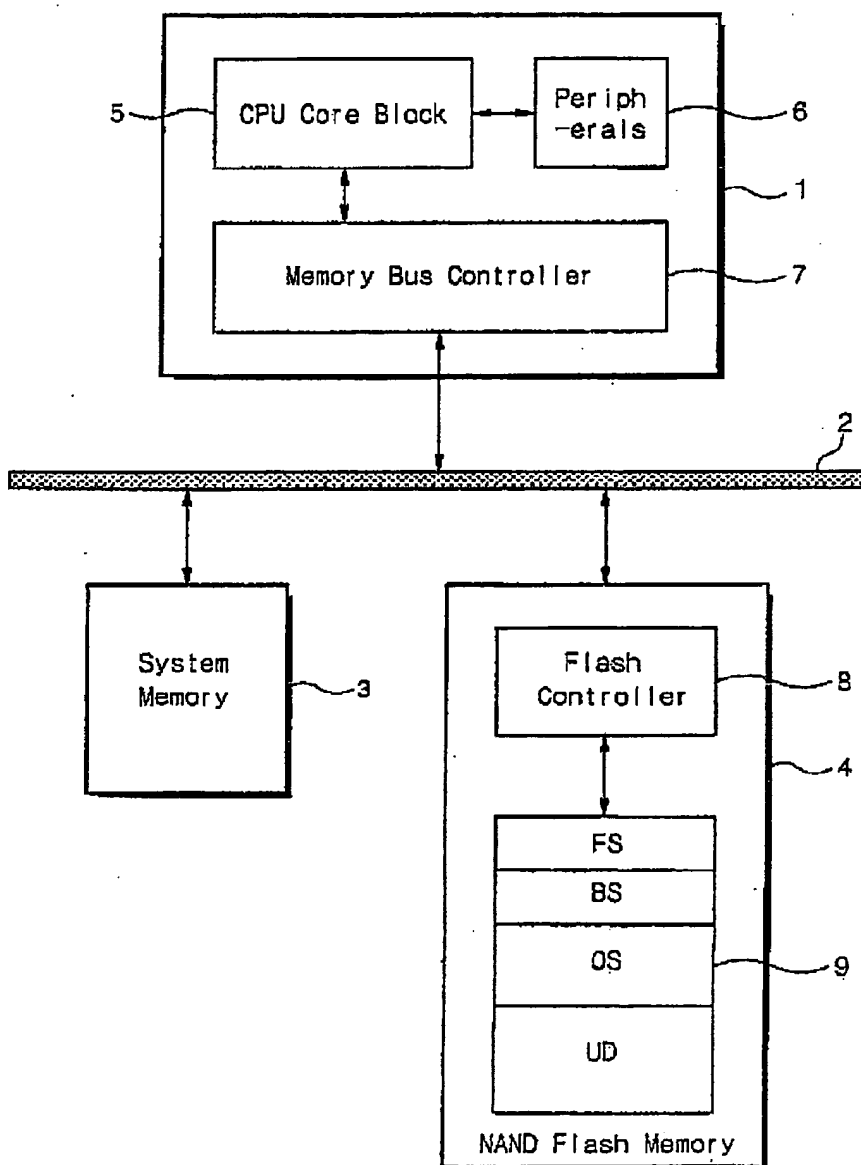
Young-Joon CHOI, et al.
COMPUTER SYSTEM WITH NAND FLASH MEMORY FOR BOOTING AND STORAGE
Attorney Docket No. 4591-343/Application No. 10/629,049

1/3

Annotated Sheet Showing Changes

Fig. 1

(CONVENTIONAL)



Young-Joon CHOI, et al.

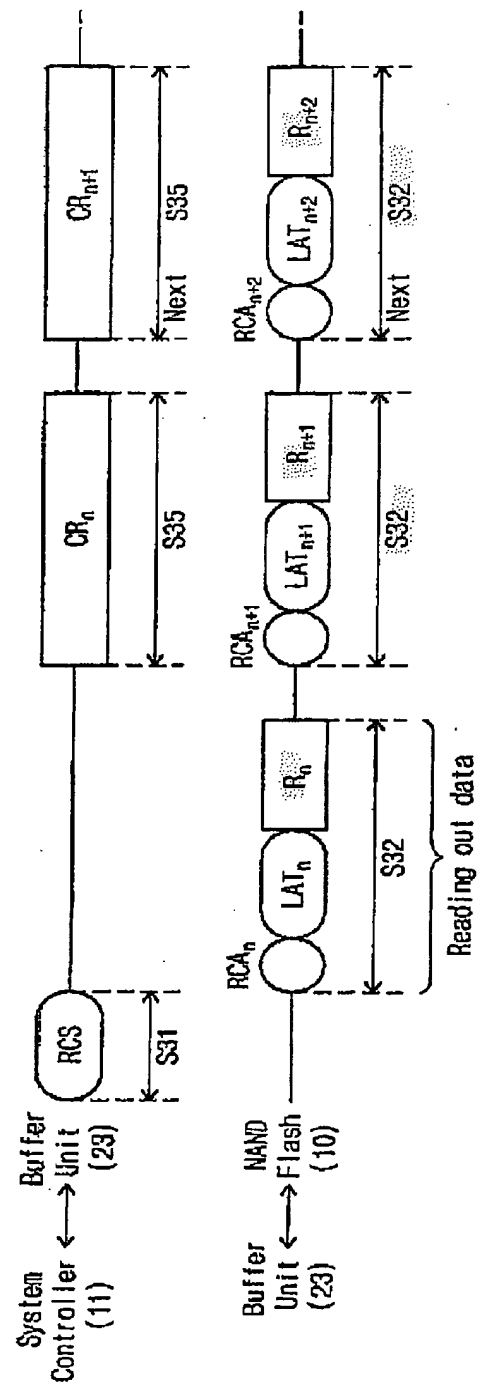
COMPUTER SYSTEM WITH NAND FLASH MEMORY FOR BOOTING AND STORAGE

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2/3

Annotated Sheet Showing Changes

Fig. 6



Young-Joon CHOI, et al.

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Attorney Docket No. 4591-343/Application No. 10/629,049

3/3

Annotated Sheet Showing Changes

Fig. 11

